Manitoba
Natural Resources

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prepared by the
Resource Allocation Working Group

PLANNING REPORT ON NATURAL RESOURCES

R.M. OF ST. FRANCOIS XAVIER

Technical Report 88-02

Municipal Council or established Planning District Boards are charged with the responsibility for municipal land use planning and development. This document has been prepared in response to a request from the local municipal planning authority for background material on the subject of natural resources for which the Department is responsible.

This document describes the natural resources in the study area, and identifies Provincial and Departmental concerns and objectives from a land use, development planning perspective. It offers for review, policies and guidelines to remedy, mitigate or anticipate issues and land use problems.

The bases for this report are the Provincial Land Use Policies dealing with natural resources and the policies of Manitoba Natural Resources.

Municipal planning is a consultative process, and the information and policies discussed in this document are offered as advice to the local authority in their land planning deliberations.

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FISHERY RESOURCES

I. PRESENT CONDITIONS/INTRODUCTION

The Assiniboine River and its tributaries are the only significant fisheries in the Municipality (Map 1). The river supports several fish species, including walleye, sauger, perch, northern pike, catfish, rock bass, mooneye, goldeye, freshwater drum, bullheads, white suckers, silver redhorse suckers, quillback suckers, burbot, carp, chestnut lamprey and numerous minnows. Fish stocks sustain themselves through natural reproduction so protection of their habitat is necessary if population quality and quantity is to be sustained.

Angling occurs at a few access points along the Assiniboine River. Success varies from year to year. The extent of the fish harvest has never been monitored intensively at any location within the Municipality.

Fish kills of varying severity have been reported on the Assiniboine River. The causes of the die-off have not always been determined. Water quality is highly variable and is influenced by upstream uses, erosion, rate of discharge and algae production along the river. Indirectly, waste disposal, livestock operations, runoff and erosion from adjacent rains and watersheds tend to add fertilizing nutrients to the river which add to algae production. The decomposition of this algae biomass can deplete dissolved oxygen values to levels critical for fish. Algae problems can impact the quality of water supplies and increase water treatment costs of downstream users.

II. CONCERNS/OBJECTIVES

Impacts that threaten water quality, quantity and the physical habitat can also threaten fish populations. Since fish demand is high, the Assiniboine River and its watershed should be protected. Specifically, the fisheries concerns/objectives are:

1. Fish are a renewable or replenishable Crown resource and it is incumbent upon all governments to ensure the provision of a suitable habitat that will assure continuing fish stocks for the long term benefit of all Manitobans.

2. To ensure the survival or improvement of fish stocks (subject to the effects of natural environmental changes and approved man-made environmental changes); specifically, to protect existing fisheries habitats, spring spawning sites and nursery areas and drains along the Assiniboine River.

3. To maintain, enhance and diversify angling opportunities to Manitobans to meet existing and future demand.

4. To promote communication and cooperation between private landowners, industry, the public, local government and Manitoba Natural Resources so as to achieve high standards of conservation practices.

III. POLICIES/GUIDELINES

Although fisheries habitat is being stressed and has been reduced, what remains can be retained and enhanced by judicious use of land and water in the Municipality. In order to achieve the fisheries objectives and to mitigate and alleviate concerns, the following apply:

1. Fisheries habitat, spawning sites and nursery areas shall be protected.

    a) Ditching and stream re-channelization, wherever practicable, should not be permitted in direct tributaries to the Assiniboine River capable of supporting spawning and nursery habitat. The construction of dykes as opposed to channel deepening and straightening shall be encouraged. Measures to limit nutrient and sediment inflow shall be encouraged. Gravel extraction from the Assiniboine River should not be considered.

    b) Land clearing, cultivation and development to the edge of the Assiniboine River shall be prohibited. Where possible a buffer strip of natural vegetation 92.0 meters (300 feet) wide from the ordinary high water mark shall be maintained along the Assiniboine River. Development or maintenance of appropriate vegetation cover along waterways to prevent erosion, siltation and reduce runoff shall be encouraged.

2. Shorelines subject to intensive use and development should be protected from excessive erosion and organic loading. Activities that discharge pollutants shall be restricted in their location and it may be required that precautionary safeguards that mitigate the pollutant be incorporated into the development activity.

3. The right of public access to fishing waters shall be encouraged.

4. River and stream crossings associated with road development should be constructed in accordance with Manitoba Natural Resources stream crossing guidelines to minimize damage to fish and fish habitat.

IV. IMPLEMENTATION

The objectives and policies with respect to fisheries shall be implemented as follows:

1. By assistance and advice on conservation practices by the staff of Manitoba Natural Resources.

2. By public and private co-operation through management and development agreements.

3. By the Council through the judicious use of restrictive zoning bylaws, subdivision control procedures and the issuance of development permits.

FORESTRY RESOURCES

I. PRESENT CONDITIONS/INTRODUCTION

The R.M. of St. Francois Xavier lies within the Aspen Parkland Forest Section, specifically Forest Management Unit 02 as defined in the 1980 Manitoba forest inventory classification system (Map 2). The forest inventory on the area was completed in 1981. Both Crown land and private land forest inventory information is available and should be of benefit to landowners in the area. Field forest measurements that were required on private lands to complete the forest inventory were only done with permission from the landowners.

For areas in close proximity to population centres, landowners with forested land on their holdings might consider growing trees as a crop, such as fuelwood for example. This is particularly true for land unsuitable for other agricultural purposes but still capable of supporting tree growth.

While trees and forests have value as a renewable cash crop, their presence is valuable in other ways. These include control of precipitation run-off and retarding snow melt to lessen flood risk; erosion control both water and wind; a habitat for wildlife; and recreation opportunities for people. Furthermore, forest harvesting operations can be done in a manner that will enhance all forest values; however, it is essential that fire be kept out, destructive grazing be avoided, and any utilization or disposal of elm trees be in conformance with the Dutch Elm Disease Act and Regulations.

II. CONCERNS/OBJECTIVES

Principal objective:

To effectively manage and protect forested lands, and to maintain and enhance the overall benefits accruing from the forest resource.

Specific objectives:

1. To sustain the integrity of the forest land base in Manitoba and to maintain the forest resource in a healthy and productive state.

2. To encourage responsible use and husbandry of the forest resource, to obtain maximum achievable net benefits including employment and recreation opportunities, sound land use practices and soil conservation.

3. To assist in the creation and sustenance of self-supporting industries by providing appropriate tenure and access to a forest resource managed under sustained yield practices.

III. POLICIES/GUIDELINES

The general policy applying to forests on Crown land will be to improve sustained yield and intensive management practices beginning with the more productive and accessible forest sites in the Province as economic conditions and funding support permits.

The general policy applying to forests on private land will be to encourage efficient and effective utilization of these timber resources as cash crops, and as a soil conservation land use technique for controlling erosion, etc.

IV. IMPLEMENTATION

The objectives and policies as outlined shall be addressed and implemented as follows:

1. By the Board and/or Councils through the judicious use of-restrictive zoning by-laws, subdivision control procedures and the issuance of development permits which recognize the intent of the concerns and objectives identified.

2. By encouraging good forest management practices on all forested land.

3. By maintaining the integritv of the forest land base.

4. By assistance and advice on conservation practices by staff of Manitoba Natural Resources and by public and private co-operation through management and development agreements.

OUTDOOR RECREATION

I. PRESENT CONDITIONS/INTRODUCTION

Within the R.M. of St. Francois Xavier there are three sites administered by the Parks Branch (Map 1). The Meridian and Whitehorse sites are two small historic sites along the Trans-Canada Highway. The third site is Beaudry Provincial Heritage Park. Only the smaller, northern portion of Beaudry is within the R.M.; the majority of the park is south of the Assiniboine River outside the R.M.

Beaudry Park is significant in that it is the park representative of the tall grass prairie region of Manitoba and also hosts some of the finest examples of riverbottom forest in Canada. Beaudry has an important role to play in preserving these natural features. Beaudry is also important for the recreation opportunities it can offer to the nearby urban population.

The suitability of land for outdoor recreation has been estimated by the Canada Land Inventory (CLI) (Map 1). This survey found that no lands in the Municipality had a "very high" (Class 1) or "high" (Class 2) capability for outdoor recreational activities. However, one parcel of land comprising about 200 hectares where the Trans-Canada Highway crosses the Assiniboine River, has a "moderately high" capability (Class 3) for camping, canoe tripping, and viewing upland wildlife. About one-third of the land adjacent to the Assiniboine River has a "moderate" capability (Class 4) for these same purposes, as well as lodging, nature study, and agricultural/social interest. Almost all of the remainder of the Municipality has a "moderately low" capability (Class 5) for outdoor recreation in the form of seasonal and other country housing, camping, hiking, canoe tripping and nature viewing.

Lands having better recreational values in the Municipality are not widespread, and are likely to be used in response to the substantial demand originating from the City of Winnipeg. Therefore, particular attention must be paid to prevent the misuse of these lands in a way that would diminish their recreational value. Much of this property is in private hands, so that municipal authorities must use the mechanisms at their disposal to preserve and protect such recreational opportunities as the area affords. In particular, the area can be expected to experience increasing demand for hiking, canoe-tripping, and seasonal residential uses of suitable lands (although the former will, for the time being, be satisfied if Beaudry Park is developed). Particular attention needs to be paid to parcels suited for these purposes in order to maximize the use which can be made of them while guarding against overuse and degradation.

Other forms of recreations are provided for by locally-oriented recreation facilities such as community clubs, ball parks, curling clubs, and golf courses, whose needs for suitable land base and isolation for non-complimentary land uses will be an essential part of any land-use zoning scheme. The modern trend to locate vacation homes in other than beach-side locations, and for city workers to locate permanent residences in rural areas, will have to be a consideration in devising the rules governing rural residential development.

II. CONCERNS/OBJECTIVES

The future development of the Municipality should undertake to maximize its potential for outdoor recreation by maintaining or enhancing environmental quality and by insuring the optimum development of outdoor recreational resources based on the natural capability of the land. The provision of recreation opportunities for local residents should be a high priority. The identification, maintenance and protection of the basic resource is most important. Once identified, higher quality lands should be designated in whole or in part for recreational purposes, and development activities which would tend to degrade these lands should be prohibited. Areas of highest potential for present and future recreation opportunities (lands in CLI Classes 3 and 4), and the access routes to them, must be safeguarded through policies which are sensitive to and supportive of outdoor recreation. If these valuable resources are disrupted or damaged by conflicting developments, the recreation opportunities and benefits will be diminished, very likely permanently.

The following are specific concerns/objectives:

1. Meridian and Whitehorse sites will be maintained at their current level and present no special concerns.

2. Beaudry is a relatively small park and the degree of protection needed for its significant natural features and recreation opportunities cannot be afforded within the park boundaries. Developments along the periphery of the park could drastically alter the atmosphere and setting of the park. Therefore, there is a need to create a buffer zone around Beaudry Park to protect it from encroaching developments.

3. Lands having better recreational capability or attractive features should be regulated through resource use policies which give a high priority to outdoor recreation.

4. Outdoor recreation resources should be developed in a manner which facilitates recreational opportunities for residents of the area, and maximizes their economic benefits.

5. The sensitivity of the resource to development should be considered. Development should only be allowed to the carrying capacity of the resource.

6. Recreation lands must be afforded protection from adjacent land uses which would diminish recreation opportunities in quality or quantity. This includes the provision of adequate open space, privacy and protection from the intrusion of incompatible land uses.

7. The right of public access to high-value recreation areas should be maintained wherever possible, especially to river banks. The highest priority should be placed upon the provision of public day-use facilities and campgrounds adjacent to river banks.

8. Road corridors to recreation areas should be identified and afforded protection in order to maintain the integrity of the recreation

opportunities.

9. Areas having higher recreation potential must be protected from unplanned, sporadic residential development.

III. POLICIES/GUIDELINES

1. Lands having relatively good capacity for outdoor recreation will be identified and will be considered for recreational development. Other land uses may be allowed, but these will be considered in light of their potential effects on outdoor recreation interests. Buffer zones around recreation areas will be provided for in the zoning by-laws. The development will suit the topography and consideration will be given to conserving natural vegetation, drainage features and the natural lay of the land.

2. In accordance with Provincial Land Use Policy Number 8, an area will be designated as a buffer zone for Beaudry Provincial Heritage Park, comprising the Flood Risk Area District and a 300 metre northerly extension on River Lots 210 to 220 inclusive (Map 1). The new designation for this area will be Park Buffer Zone whose purpose is to enhance and protect the Park by precluding developments and activities which may create a visual, audible, or contaminating impact on it. The zoning requirements will permit only such non-intensive open space, natural and agricultural activities as forest, nature, fishing and wildlife reserves, recreation facilities (such as equestrian, hiking, and snowmobile trails, and picnic areas), and horticultural and agricultural activities. Other uses, such as residences and commercial properties, will only be permitted if they were in existence at the date of passage of the by-law creating the Zone. Certain other uses would be considered and conditional: facilities for communications and for water measurement and control, and activities directed towards soils and water conservation, including bank stabilization, and the accessory buildings to these. In the cases of structures, these shall be located on sites having a minimum of .4 hectare, with minimum width of 40 metres and setbacks of 3 metres. Maximum height of structures would be 11.5 metres. In the part of the Zone between the river and the Flood Risk Building Restriction Line, development will also be subject to the requirements of Section D8.5, as amended.

3. Recreation developments will be permitted only to the carrying capacity of the resource being utilized, as determined by the Council. In each case, it will be necessary to recognize and avoid or protect against natural hazards such as flooding, poor drainage, high water table, river bank erosion, and the like, which might endanger public health and safety, cause property damage, or make municipal servicing more costly. No structure or buildings shall be built below the 100 year flood level nor on land subject to other physical hazards.

4. Recreation developments will be planned and carried out in a manner which minimizes interference with wildlife habitat.

5. New residential subdivisions will be allowed where the land base is most suitable for this purpose, and following an assessment of the demand for

this type of recreational land use. Subdivisions will be laid out in a manner which avoids having a continuous tier of structures fronting on the river bank, where this is possible. The undertaking of such a development will be governed by a development agreement which set forth conditions with regard to roads, landfill, building type restrictions, public reserve, effluent disposal, staging, and other matters.

6. Residential subdivisions will have adequate sewage disposal and an adequate supply of potable water. All lots will have a sewage disposal system to prevent nuisances such as odours and public health hazards. Liquid waste disposal sites will be available for holding tank effluent. Wells will be constructed in such a manner as to avoid contamination risks.

7. New subdivisions adjacent to high quality recreation opportunities will have not only a public reserve area but also sufficient parking space, access area, garbage cans, washrooms, etc., for public day-use. Where possible, such areas will be separate from the residential areas. Dedication of land for open space will be required for new developments in accordance with Section 74 and 75 of the Planning Act. River bank reserve will be a minimum of 100 feet and be adequate to meet environmental needs and provide for public access.

8. Control will be exercised in the approval of seasonal or permanent rural residential development. Specific areas for such development will be identified and promoted in order to avoid uncontrolled and dispersed residential spread, as scattered or random residential development would generally be in conflict with efficient use of recreational resources, and would increase municipal servicing costs unduly. Permanent non-farm and seasonal residences should not be allowed outside of planned and designated sites; existing residences of these types outside of designated areas will be identified as non-conforming uses.

9. Existing areas and routes of public access will be identified and maintained or improved. Development policies respecting lands along access routes to recreational areas will not permit the quality of the recreational opportunity to be degraded or endangered. Strip development along provincial and major municipal roads will not be allowed in these areas.

10. Agricultural land use practices and policies applying to areas within or in close proximity to important outdoor recreation areas will not adversely affect the recreation opportunities. Equivalent limitations will apply to other land use practices in these areas.

IV. IMPLEMENTATION

The policies of this section shall be implemented through the following:

1. Adoption of zoning by-laws to protect designated park and recreation areas, in part by the creation of a Park Buffer Zone.

2. Promotion of public acquisition of river bank park areas.

3. Subdivision control procedures including requirements for public open space and river bank reserve dedications.

4. Development agreements.

Consultation with staff of Manitoba Natural Resources is encouraged.

WATER RESOURCES: GROUNDWATER

I. PRESENT CONDITIONS/INTRODUCTION

The potable groundwater supply in the Municipality is limited and it is not uniformly distributed. Potable groundwater is available mainly in a narrow zone along the Assiniboine River. The potable water zone widens out near the western and eastern ends of the Municipality (Map 1). In most of the Municipality groundwater is saline and not potable.

The potable water aquifers along the Assiniboine River are formed by lenses of sand in clay and silt alluvial deposits. The depth to the aquifers usually is less than 5 metres (m) and the yield is low. Water quality in the sand aquifers ranges from good to poor.

The main aquifer in the area is formed by carbonate bedrock (limestone and dolomite) that underlies the whole Municipality. In most of the Municipality water in the carbonate rock aquifer is saline and not potable. Potable water in the bedrock aquifer is found in the western end of the Municipality and along its eastern boundary. The depth to the carbonate bedrock ranges from 5 m to 25 m and usually is around 15 m. The yield of the bedrock aquifer is adequate to abundant for domestic and normal farm requirements.

A small elongated sand and gravel aquifer occurs about three kilometres north of the Community of St. Francois Xavier. Water in this aquifer is potable and the quality is good to fair; the total dissolved solids concentration ranges from 1000 mg/L to 1600 mg/L.

Because the shallow sand aquifers are subject to pollution by infiltration from the surface, the same areas where these aquifers may occur are also groundwater pollution hazard areas (Map 2). The carbonate rock aquifer is overlain by fairly thick clay and glacial till layer and, therefore, is not likely to be polluted by infiltration of pollutants from the surface.

Groundwater development may cause changes in the regional groundwater flow pattern that, in turn, may cause shifting of the fresh-water and salt-water boundary. In particular, high yield wells near the boundary in the fresh-water area of the carbonate rock aquifer may cause saline water intrusion in the fresh water area.

II. CONCERNS/OBJECTIVES

Potable groundwater resources in the Municipality are not uniformly distributed; in some parts of the Municipality it is available and in extensive areas it is very scarce to non-existent. Hence the overall concern is groundwater resource management and protection to assure adequate supply for existing users and for potential development. Most of the potable water aquifers are at a shallow depth and are subject to pollution. The areas where the shallow aquifer may occur are considered to be groundwater pollution hazard areas. Deeper potable aquifers that are not likely to be polluted by water infiltration from the surface exist in the eastern and western end of the municipality.

Objectives

1. To manage the aquifers in a manner that would not deprive existing users of their water supply and would not have a detrimental effect on aquifer potential in the Municipality.

2. To maintain groundwater withdrawal within acceptable limits.

3. To prevent aquifer pollution.

III. POLICIES/GUIDELINES

1. Intensive development and high capacity wells should be permitted only in areas where they will not cause a reduction in water supply for existing users. Groundwater consumption should not exceed the total sustained yield of an aquifer.

2. Wells should be installed in a manner that will not have a detrimental effect on aquifers.

3. Activities that may cause pollution under normal operating conditions or by accident should not be permitted in groundwater pollution hazard areas unless it can be proved by adequate field investigation that the proposed activities will not cause pollution of existing or potential groundwater supply in the area.

IV. IMPLEMENTATION

Aquifer management is implemented by the Water Resources Branch of Manitoba Natural Resources under the provision of the Ground Water and Water Well Act and the Water Rights Act.

Well construction in respect to prevention of detrimental effect on aquifers is regulated by the Water Resources Branch of Manitoba Natural Resources under the provisions of the Ground Water and Water Well Act.

Aquifer pollution prevention is implemented by the Environmental Management Division of Manitoba Environment and Workplace Safety and Health.

WATER RESOURCES: SURFACE WATER

I. PRESENT CONDITIONS/INTRODUCTION

The Rural Municipality of St. Francois Xavier is located along the north side of the Assiniboine River, immediately west of Winnipeg. The Assiniboine has had a history of flooding since the beginning of the settlement of the west. There are records of flooding on several occasions in the 1800's and at least 14 floods of various magnitudes have been recorded since 1913.

St. Francois is subject to some of the most serious flooding. In the western part of the municipality, the river flows along a ridge which is higher than the surrounding lands. When the banks are overtopped the floodwaters are trapped and cannot return to the river when the peak has passed. Dykes have been constructed along this stretch and they have successfully contained subsequent floods in combination with emergency flood fighting. These dykes provide protection to existing development along the river, but should not be relied upon to protect new development due to the inherent risk of overtopping or failure associated with dykes.

In the eastern portion of the municipality, the river flows in a well-defined flood plain or meander belt. In this area the flooding is generally confined to the flood plain.

The two most recent floods on the Assiniboine River in this area occurred in 1969 and 1976. Aerial photos are available for both years. Although the two floods were nearly equal, the pattern of flooding differed, most notably in the dyked areas, because of higher local inflow and related drainage problems in 1969. These floods closely approximate the 100 year flood and may be used to establish the design flood for the municipality.

The Assiniboine is an actively meandering river and, as a result, there are many areas suffering erosion and bank instability problems. While the problems are most serious on the outside of bends, all potential development sites adjacent to the river should be checked for possible problems.

II. CONCERNS/OBJECTIVES

Because St. Francois Xavier is situated so close to Winnipeg, there is considerable development pressure on the municipality. Generally, the most attractive land for development is the land near the Assiniboine River. Much of this land is subject to flooding and erosion hazards. Development within land is subject to flooding and erosion hazards. Development within hazard areas can lead to acceleration of environmental damage, interference with natural processes, public expenditures for remedial works or assistance, waste of resources, and personal loss and hardship. To mitigate against these potential expenses and damages, the following objectives are established:

1. To maintain at a minimum hardships to people and damage to property caused by flooding or by riverbank erosion and instability.

2. To prevent the erection of buildings in areas unfit for human usage by reason of danger from flooding, including related unsanitary conditions and river bank erosion.

3. To reduce the unnecessary financial burdens imposed on the Municipality, its residents, and other levels of government by frequent and periodic flooding of property.

4. To permit certain uses which can be appropriately located in the Flood Risk Areas and which will not impede the flow of flood waters, or cause danger to life and property.

5. To protect the storage capacity of the Flood Risk Area to assure retention of sufficient floodway area to convey flood flows.

6. To promote safety, prevention of loss of land or investment through erosion, landslides or unstable banks, and to prevent hardships and inconveniences to the individual as well as the general public through:

   a) regulating the manner in which developments may occur;

   b) regulating the manner in which structures may be constructed so as to prevent danger to human life;

   c) prohibiting construction on lands which are unstable or subject to subsidence;

   d) conserving natural tree and vegetative covers;

   e) prohibiting activities which would increase erosion, bank instability subsidence or sedimentation.

III. POLICIES/GUIDELINES

1. Land uses involving the construction of permanent structures in Flood Risk Areas shall be considered as conditional uses which shall comply with the objectives of this document and the provisions of conditional uses in The Planning Act.

2. Land divisions such as, but not limited to, a division for a parcel other than the existing farmstead, but which is for the retiring farmer and a division for sons/daughters not actively engaged in assisting in the operation of the farm, may be permitted, subject to the provisions of The Planning Act, provided that any permitted building or structures shall be,

   a) located on land not subject to erosion, bank instability or subsidence, and

   b) subject to adequate flood protection.

3. Land divisions for agricultural (farm) uses or for existing farmsteads are permitted, except where otherwise determined by Council in order to properly effect the objectives of this document.

4. The portion of the Flood Risk Area required to convey the design flood and where the depth of flooding exceeds one metre shall be designated the

Floodway area where;

a) Public uses may be allowed and certain developments may be permitted providing that such uses are of the open space type having a low flood damage potential and will not adversely alter, obstruct or increase flood flows, flood velocities or flood stages.

b) Permitted open space uses may include: agricultural uses, recreational uses, parking lots, storage yards, and certain gravel and sand operations. Storage yards may be permitted provided that the material being stored is not susceptible to flood damage or that it can readily be moved if flooding is imminent.

c) Deposition of fill or other materials, excavation, storage of any materials, erection of fences, or any obstructions which, acting along or in combination with existing or future similar works, would adversely alter, obstruct or increase flood velocities or stages shall not be permitted.

d) Construction of structures shall not be permitted, that are:

   i) designed for human habitation;

   ii) associated with high flood damage potential;

   iii) not connected with open space uses but could materially affect flood stages.

5. A portion of the Flood Risk Area may be determined to be the Floodway Fringe where developments may occur provided that:

   a) There is permanent flood protection against the Design Flood.

   b) There is permanent access under Design Flood conditions.

   c) There is minimum risk to life and injury.

   d) There is continuation of provincial, municipal and domestic services under Design Flood conditions.

   e) There is provision for adequate drainage.

   f) Unless Council is of the opinion that the land is not subject to flood hazard, sufficient contour information shall be provided by a Professional Engineer or Manitoba Land Surveyor, related to the Geodetic Survey of Canada Datum for the site specified and if Council deems necessary the site is to be shown on a surveyor's sketch. A Professional Engineer should determine whether or not the site specified complies with the criteria for this land use are and submit this report to Council for Council's decision.

6. The policies of this part shall apply to lands designated as "Flood Risk Area" on the Development Plan Map.

7. For implementation of the policies of the Flood Risk Area, regulations will be contained in the Zoning By-Law.

8. Building sites in the areas protected from flooding by the Assiniboine River dykes shall be located and graded in such a manner as to avoid damages should the dykes fail or be overtopped.

IV. IMPLEMENTATION

The Policies shall be implemented by means of, variously, zoning by-laws, conditions of subdivision approval, the issuance of development permits and building permits, development agreements and such programs as are determined from time to time by the Board or Council to be necessary and not in conflict with the provisions of any part of the Plan.

WILDLIFE RESOURCES

I. PRESENT CONDITIONS/INTRODUCTION

Substantial loss of wildlife habitat has already occurred in the Municipality, as exemplified by the drainage and cultivation of Long Lake, which was rated by the Canada Land Inventory as being Class 1 for waterfowl. Due to the general loss of habitat in the Municipality, the provincial significance of this area to wildlife is low.

It should be noted, however, that lands along both sides of the Assiniboine River are rated by the Canada Land Inventory as being Class 3 ("having slight limitations to production") for waterfowl and for wild ungulates, such as deer. Existing tree cover and natural vegetation provide some wildlife habitat, as well as enhancing recreational, open space, and fisheries values.

The wildlife of the Municipality continues to have considerable local significance to its residents, whose numbers are increased by visitors and growing residential development from Winnipeg. Therefore, the administration of areas having value for wildlife production must take into account local desires and interests in the maintenance of wildlife populations.

II. CONCERNS/OBJECTIVES

The primary concern to wildlife is the continued loss of remaining habitat. Illegal harvest, disturbance of nests, the use of pesticides and herbicides, crop depredation, problem animal controls, hunter-landowner relations and present use of the land base are all topics of concern to wildlife.

It is important to recognize that nongame species and particularly birds are of significance in these circumstances and continued destruction of native and woody vegetation should be prevented.

Objectives

The following objectives should serve as a guide in land use planning for areas affecting wildlife. These objectives are:

1. To maintain populations of each species at present levels through the maintenance of proper habitat conditions for all species. No species presently found within the Municipality should be reduced to the point where it may be exterminated.

2. To encourage wildlife habitat maintenance and the establishment of new habitat.

3. To encourage education regarding the value of wildlife and wildlife habitat.

4. To promote communication and co-operation between private landowners, all groups and individuals interested in use of the resource, local government, and Manitoba Natural Resources so as to achieve high standards of conservation practices.

5. To encourage the preservation of riparian habitat for wildlife.

III. POLICIES/GUIDELINES

1. The Municipality should protect from clearing all shrub or tree cover on lands with low agricultural capability.

2. Windbreaks, hedgerows, drainage ditches, road allowances, small blocks of wooded cover, riverbanks and streams are the primary habitat left in areas where there is intensive cultivation. These should be maintained for the production of wildlife.

3. Landowners and the Municipality should be encouraged to retain natural marshes and ponds in their native condition.

   a) A buffer strip of natural vegetation surrounding the wetland should be maintained. Upon request, the Wildlife Branch will assist a landowner in determining specific amounts of natural vegetation to be protected around specific wetlands.

   b) There shall be no drainage and filling in of wetlands. Exceptions may be allowed after consultation with Manitoba Natural Resources and Council.

4. Areas prone to waterfowl or deer depredation should be identified and landowners encouraged to work cooperatively with N.R.O. staff of Manitoba Natural Resources in an attempt to reduce or minimize losses.

5. Significant wildlife habitat along the Assiniboine River should be afforded protection as follows:

   a) Erosion prone lands (slopes in particular) shall be left in a natural state. Use of these areas shall be such that soils are stabilized and the suitability of the land as habitat is maintained.

   b) Development of riparian habitat to non-agricultural (i.e. residential, commercial or industrial) should be discouraged.

   c) Farming practices which minimize soil erosion shall be encouraged.

6. The use of pesticides and herbicides should be carefully controlled so that wildlife habitats and natural water bodies are not degraded or become dangerous to wildlife.

IV. IMPLEMENTATION

The objectives and policies of the Municipality with respect to land use and wildlife resources should be implemented as follows:

1. By assistance and advice on conservation practices by staff of Manitoba Natural Resources and Manitoba Agriculture.

2. By public and private cooperation through management and development agreements.

3. By the Municipal Council through the judicious use of zoning bylaws, subdivision control procedures and the issuance of development permits.

CROWN LANDS

INTRODUCTION

This section describes the Crown lands in the municipality, providing an inventory of Crown lands and present commitments. Additionally, this section will discuss the authority for Crown lands, the legal aspects thereof and the planning and administration of Crown land.

DEFINITION

Crown land, for the purposes of this section, is defined as all land under Order-in-Council designated as: Provincial Park, Provincial Forest, Ecological Reserve, Wildlife Management Area, and Community Pasture, plus all other land administered by Manitoba Natural Resources and Manitoba Agriculture under "The Crown Lands Act." In addition, all waterbodies, streams, rivers, and creeks are considered Crown lands except where original title has confirmed the lake bed or stream bed to an individual.

ACTS AFFECTING CROWN LANDS

There are a variety of acts which affect the administration and management of Crown lands. For the purposes here, the principal acts which govern use and management of these lands are:

1. The Crown Lands Act,
2. The Fisheries Act,
3. The Forest Act,
4. The Provincial Park Lands Act,
5. The Water Power Act,
6. The Rivers and Streams Act,
7. The Wildlife Act,
8. The Water Resources Administration Act, and
9. The Ecological Reserves Act.

MANAGEMENT AND ADMINISTRATION OF CROWN LANDS

The actual management and administration of Crown land is shared between two Departments of Government, Manitoba Natural Resources and Manitoba Agriculture. Agricultural Crown Lands has been assigned the functions and related administration pertaining to the issuance of agricultural leases and permits of occupation or use of those Crown lands which are designated as:

1. primarily agricultural lands, and

2. multiple use lands which may only be used for agricultural purposes on an interim or secondary use basis, subject to specific conditions and covenants required by other resource users.

The principle responsibility for Crown land remains with Manitoba Natural Resources, which administers The Crown Lands Act excepting those specific sections under the responsibility of the Minister of Agriculture.

The Minister of Natural Resources is responsible for administration, direction

and control of the surveys of Crown lands. Survey monuments defining Township, Section and Quarter Section corners have been established throughout the Planning District.

The protection of the township survey fabric, the primary function of which is to support the transferring of rights in land via The Real Property Act or The Crown Lands Act, is essential to efficient and effective land administration. No system, purporting to give evidence of the ownership of land is complete if one cannot determine what land is being conveyed or where its boundaries are located. Boundaries, once defined, are a matter of law and the survey monument is the vital link between the ground and the administrative record.

CROWN LAND CLASSIFICATION AND PLANNING

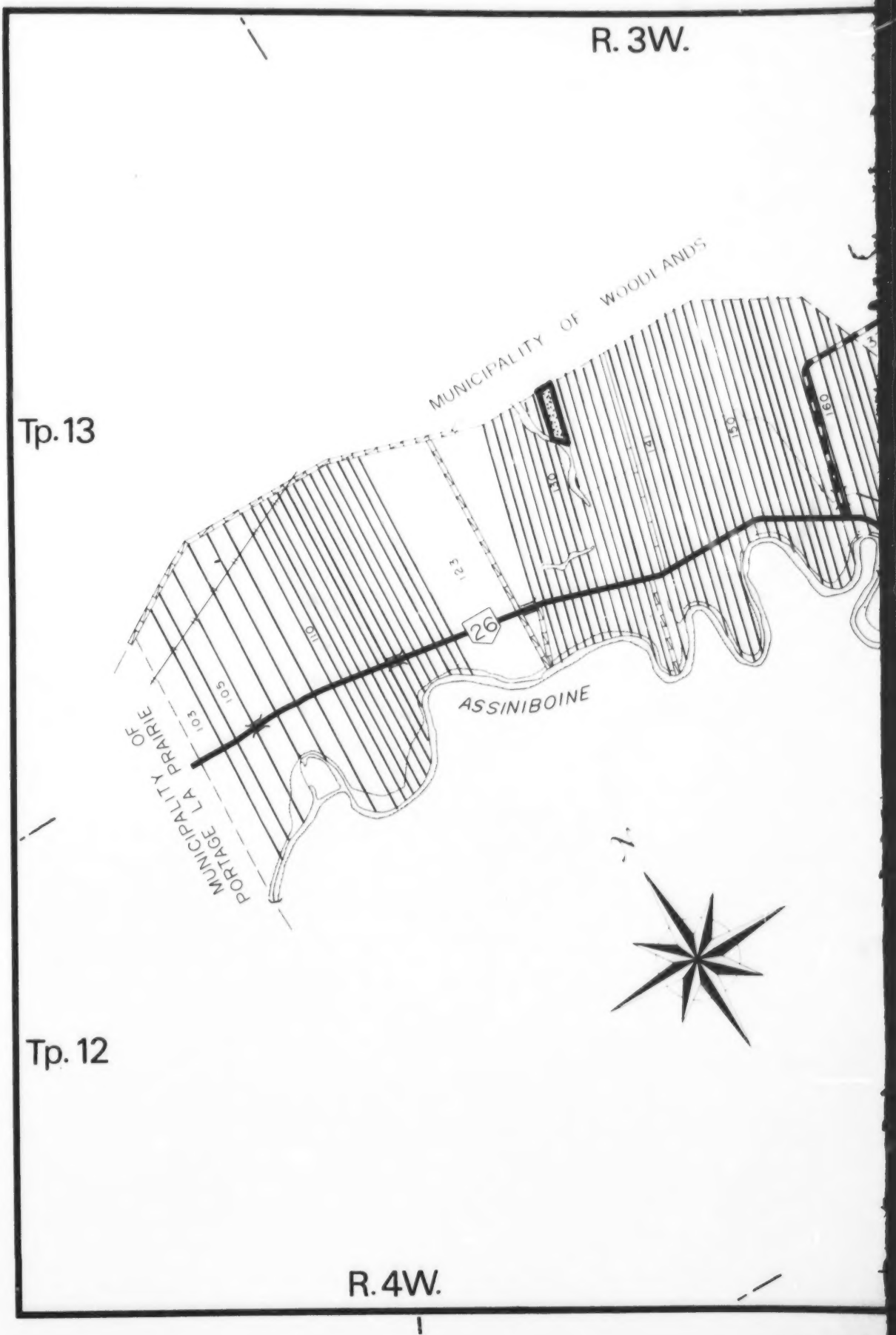
Crown land is exempt from The Planning Act and is under the jurisdiction of the Manitoba Government as governed by the Various acts of the Legislature mentioned above.

The Planning of Crown land in the southern portion of the Province is the responsibility of the Crown Land Classification Committee, (CLCC). This is an Interdepartmental Committee with representation from Manitoba Agriculture, Natural Resources, Northern Affairs and Municipal Affairs. The CLCC reports to and receives their direction from the Provincial Land Use Committee of Cabinet.

At the request of a Council or when a Planning District has been established, the Crown Land Classification Committee will prepare, in consultation with Council or the Planning Board, a Provincial Crown Land Plan for the Area.

INVENTORY

In the Rural Municipality of St. Francois Xavier there are approximately 7 hectares of Crown land in one parcel which is under agricultural lease. In addition, approximately 389 hectares have been acquired by Parks Branch under the Parks Act, comprising two segments of Beaudry Provincial Park and two small wayside sites (Map 1).


R. 3W.
Tp. 13
MUNICIPALITY OF WOODLANDS
MUNICIPALITY OF PORTAGE LA PRAIRIE
ASSINIBOINE
26
Tp. 12
R. 4W.

R. 2W.

R. 1W.

MUNICIPALITY OF ROSSER

MUNICIPALITY OF CARTIER

RIVER

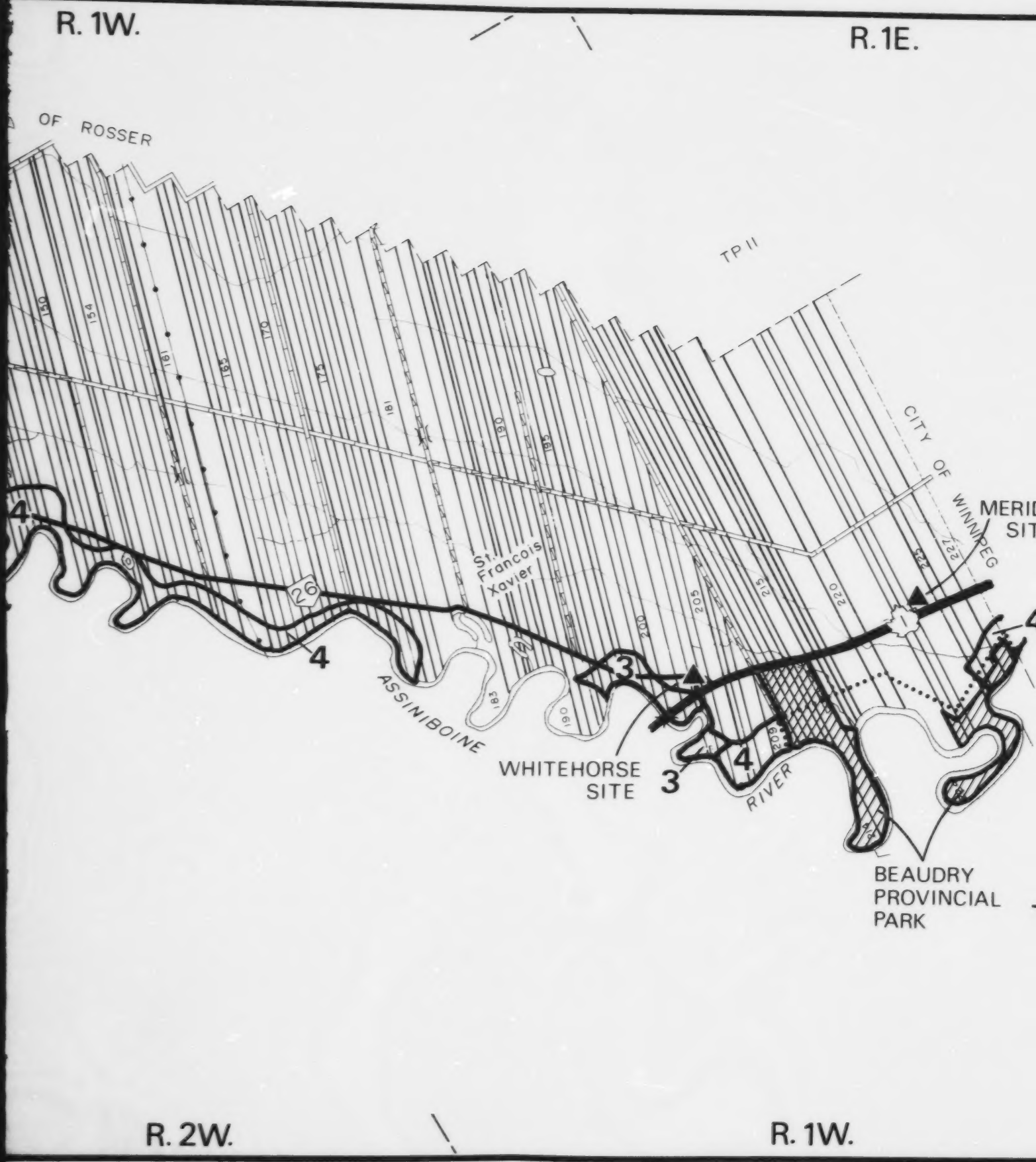
ASSINIBOINE

St. François Xavier

WHITEHORSE SITE

R. 3W.

R. 2W.


R. 1W.
R. 1E.
OF ROSSER
TP 11
CITY OF WINNIPEG
MERID
SIT
St. Francois Xavier
ASSINIBOINE
RIVER
WHITEHORSE SITE
BEAUDRY PROVINCIAL PARK
26
4
3
R. 2W.
R. 1W.

R.M. OF ST. FRANCOIS XAVIER

MAP 1.
RECREATION AND CROWN LAND.

Tp.11

▲ PROVINCIAL PARKS AND LANDS ADMINISTERED BY PARKS BRANCH

····· PROPOSED PARK BUFFER ZONE

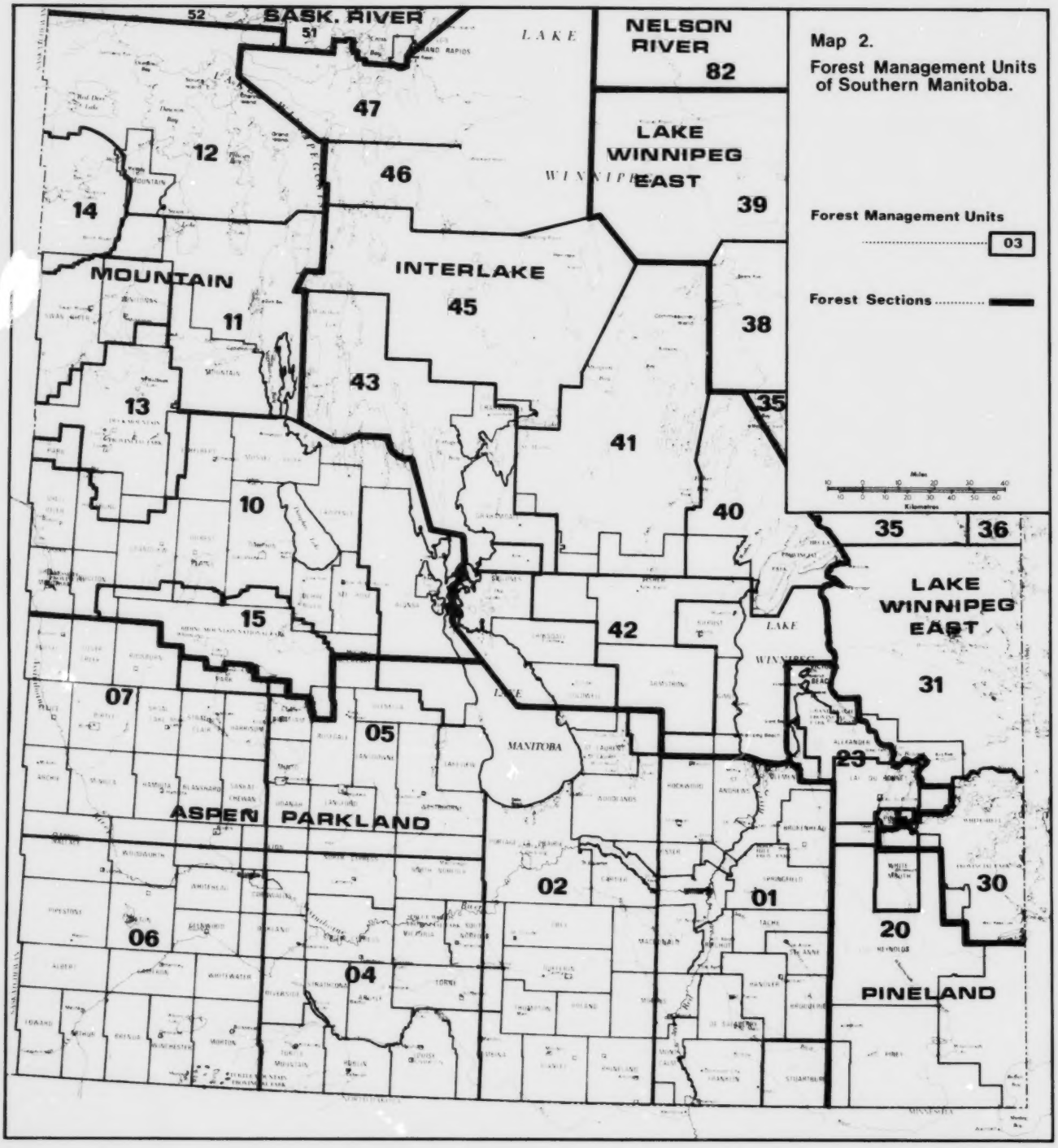
PROVINCIAL CROWN LAND (MAY, 1988)

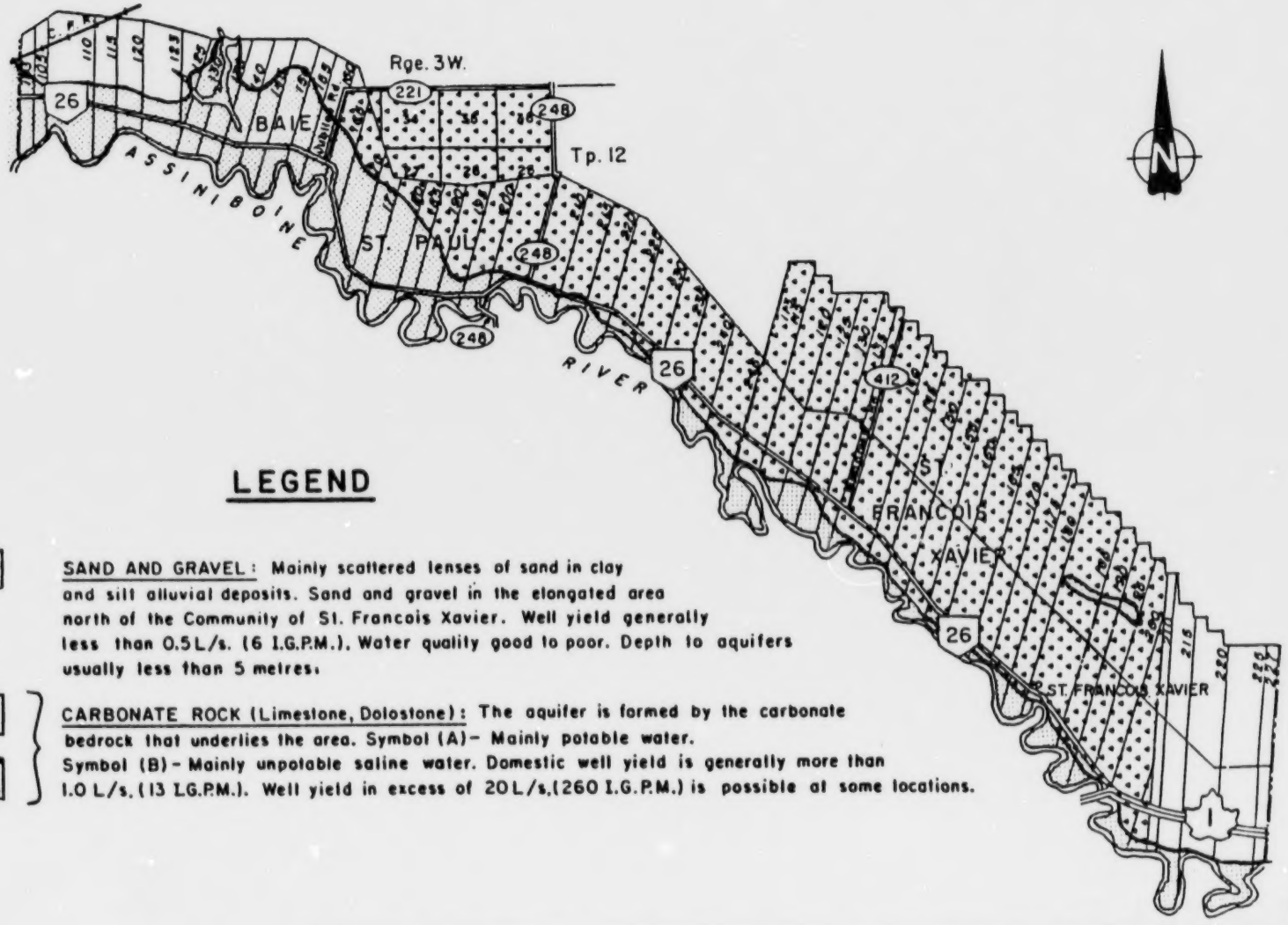
4 CANADA LAND INVENTORY- CAPABILITY FOR RECREATION (CLASSES 3 & 4)

IAN
E

TP 10

p. 10


SASK. RIVER
NELSON RIVER
82
LAKE WINNIPEG EAST
39
47
46
12
14
MOUNTAIN
11
INTERLAKE
45
38
43
13
41
35
10
40
35
36
15
42
LAKE WINNIPEG EAST
31
07
05
MANITOBA
23
ASPEN PARKLAND
02
01
30
06
04
20
PINELAND
Map 2.
Forest Management Units of Southern Manitoba.
Forest Management Units
03
Forest Sections



LEGEND

SAND AND GRAVEL: Mainly scattered lenses of sand in clay and silt alluvial deposits. Sand and gravel in the elongated area north of the Community of St. Francois Xavier. Well yield generally less than 0.5 L/s. (6 I.G.P.M.). Water quality good to poor. Depth to aquifers usually less than 5 metres.

(A) (B) CARBONATE ROCK (Limestone, Dolostone): The aquifer is formed by the carbonate bedrock that underlies the area. Symbol (A) – Mainly potable water. Symbol (B) – Mainly unpotable saline water. Domestic well yield is generally more than 1.0 L/s. (13 I.G.P.M.). Well yield in excess of 20 L/s. (260 I.G.P.M.) is possible at some locations.

MAP 3

SCALE
0 5 10
SCALE IN KILOMETRES

DRAWN F.B.R.
CHECKED
PREPARED M. RUTULIS

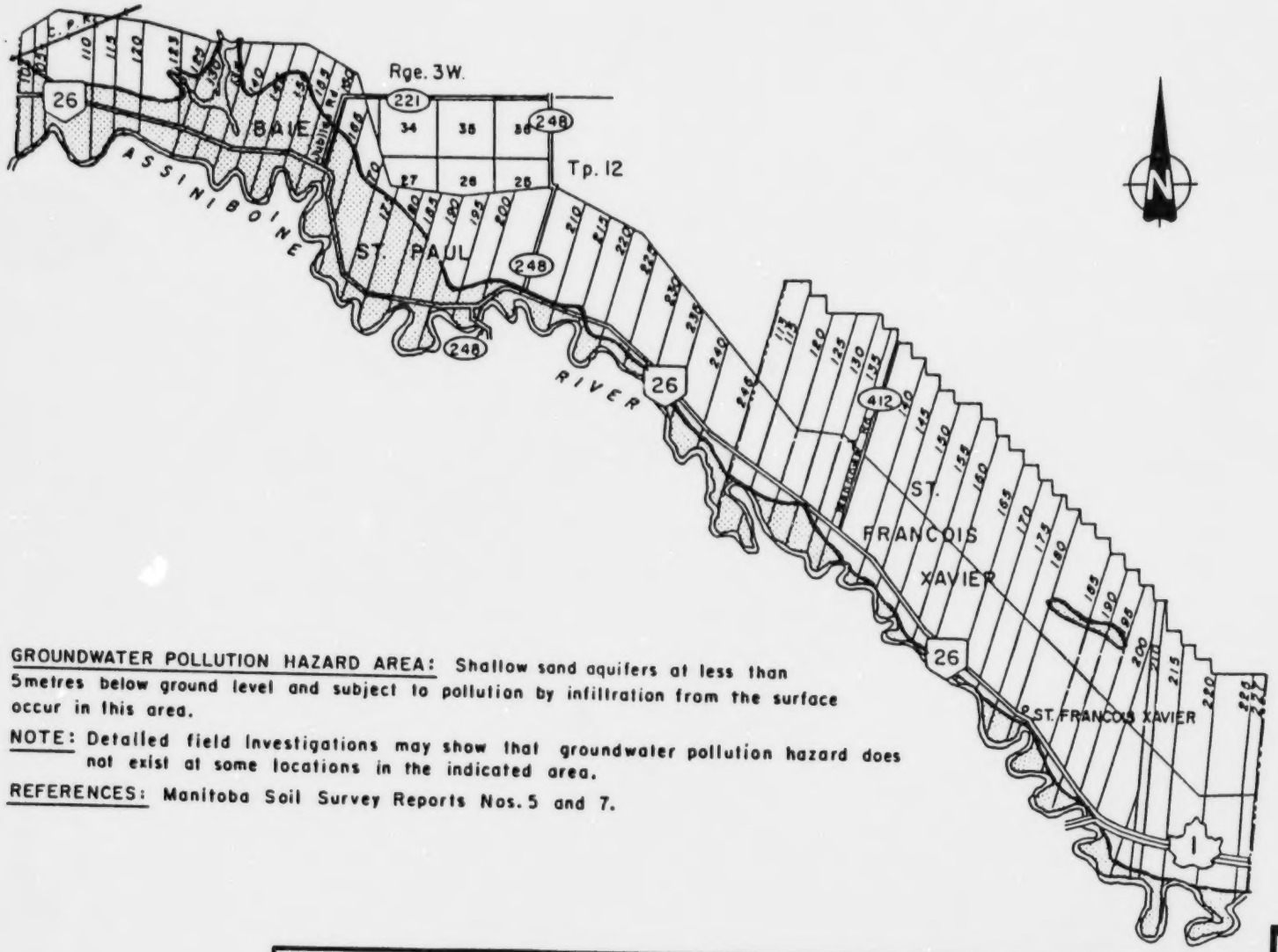
Manitoba
Natural Resources
Water Resources

SUBMITTED L. Gray
APPROVED

R.M. OF ST. FRANCOIS XAVIER

AQUIFERS

SCALE AS SHOWN | DATE 88 05 31 | SHEET 1 of 2 | FILE NO. 90-1-7-1147



— GROUNDWATER POLLUTION HAZARD AREA: Shallow sand aquifers at less than 5metres below ground level and subject to pollution by infiltration from the surface occur in this area.

NOTE: Detailed field investigations may show that groundwater pollution hazard does not exist at some locations in the indicated area.

REFERENCES: Manitoba Soil Survey Reports Nos. 5 and 7.

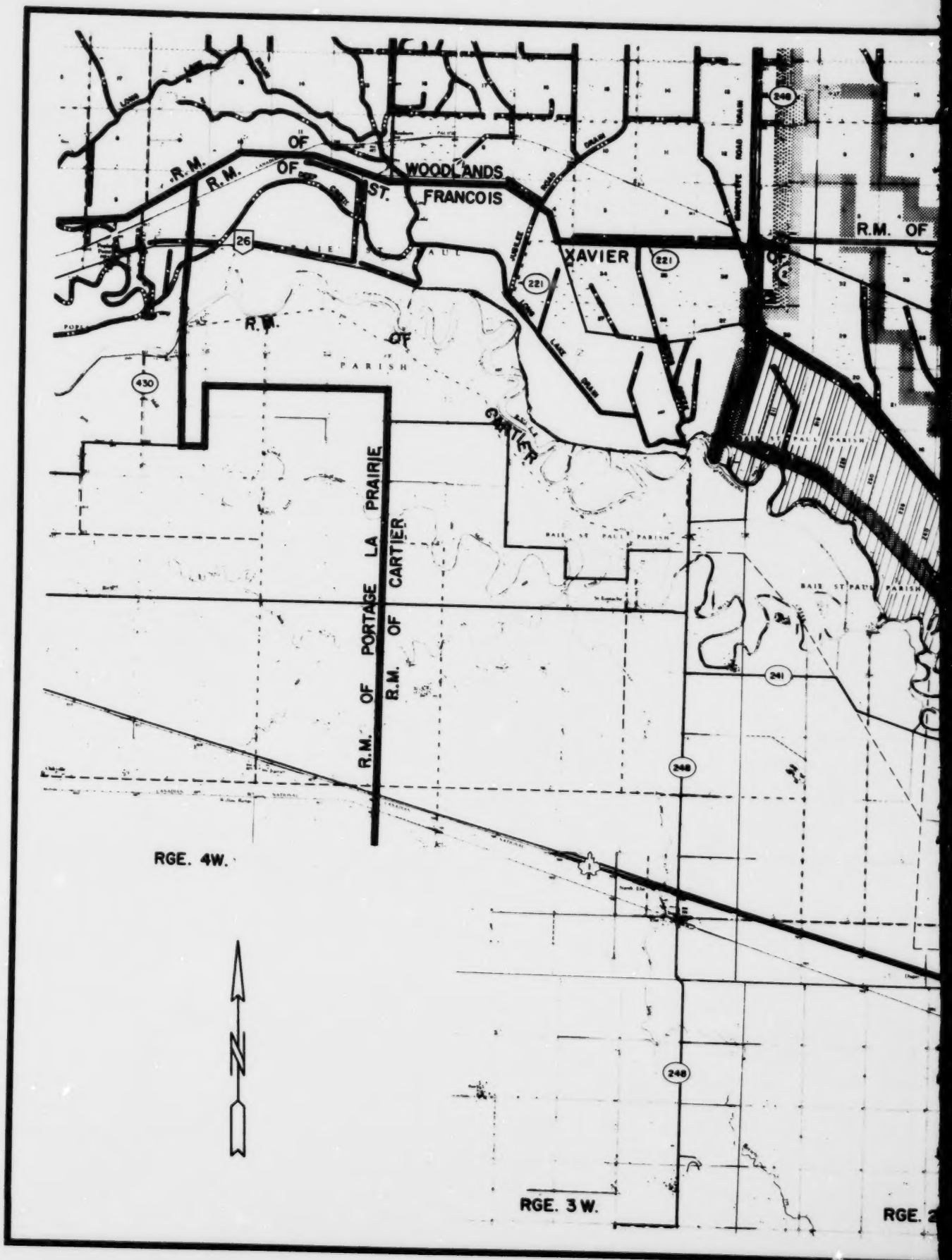
MAP 4

SCALE

0 5 10

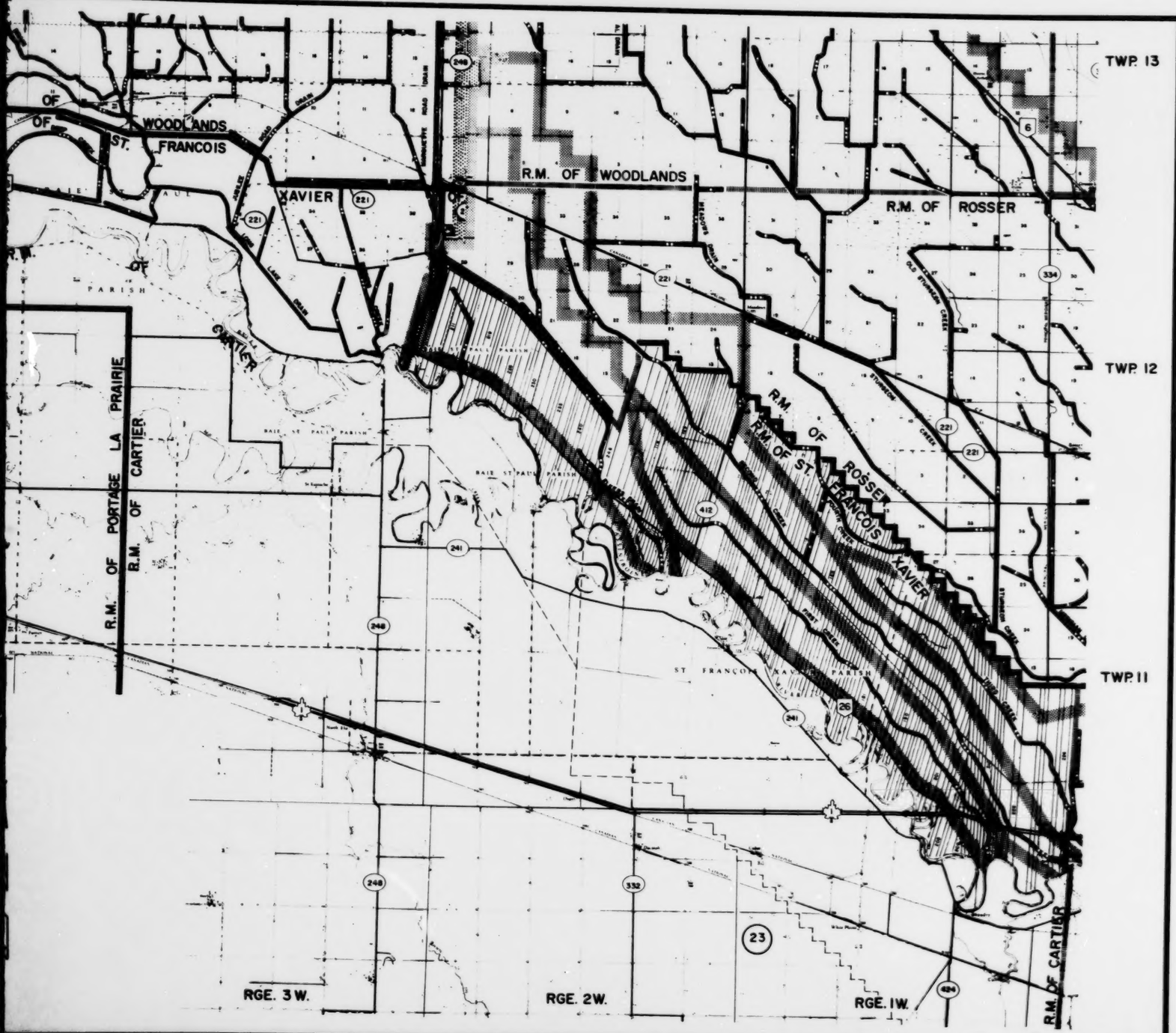
SCALE IN KILOMETRES

DRAWN F.B.R.	Manitoba Natural Resources	R.M. OF ST. FRANCOIS XAVIER		
CHECKED	Water Resources	GROUNDWATER POLLUTION HAZARD AREAS		
PREPARED M. RUTULIS	SUBMITTED L. Gray	APPROVED	SCALE AS SHOWN	DATE 88 05 31
			SHEET 2 of 2	FILE NO. 90-1-7-1147


R.M. OF
R.M. OF
WOODLANDS
ST. FRANCOIS
XAVIER
R.M. OF
R.M. OF
PARISH
CARTIER
R.M. OF PORTAGE LA PRAIRIE
R.M. OF CARTIER
BAIE ST PAUL PARISH
BAIE ST PAUL PARISH
26
221
221
430
241
248
248
248
RGE. 4W.
RGE. 3 W.
RGE. 2
N

R.M. OF ST. FRANCOIS XAVIER

Map 5.
Surface Drainage Systems



LEGEND

WATER COURSE
- 1st ORDER DRAINS
- 2nd ORDER DRAINS
- 3rd ORDER DRAINS
- 4th ORDER DRAINS
- 5th ORDER DRAINS
- 6th ORDER DRAINS
- 7th ORDER DRAINS

LIMITS OF DRAINAGE AREA

CITY, TOWN AND MUNICIPAL BOUNDARIES

PROVINCIAL TRUNK HIGHWAY (3)

PROVINCIAL ROADS (513)

ADJACENT WATERSHED (27)

SCALE IN MILES 0 1 2 3 4 5

SCALE IN KILOMETRES 0 1 2 3 4 5 6 7 8